研究会報告（その1） THE SANDERSON CAMERAS （サンダーソンカメラについて） 会員番号 0745 小林泰人

2010年2月の研究会のテーマが「カメラメーカー名あるいはカメラ名が‘S’で始まるカメラ」であり、私がご指名を受けましたので、英国カメラの中でも金字塔の一つと称されているSanderson Cameraについてお話したいと思います。

カメラ発展史の中で英国製写真機とその周辺機器の果たした役割は実に大きいのです。製品としての世界最初の写真術（ダゲレオタイプ）の発明は1839年フランスに先を越されたものの、後の1841年にカロタイプの発明者となるウイリアム・H・フォックス・タルボットは1835年には紙ネガ（塩化銀紙）で「ラコック・アベイ」という元修道院だった自宅の窓格子の撮影（原画は紙ネガでその後ポジ画像にした）に成功しました（この写真は「格子窓」として歴史的に有名です）。これはまさに昨今までの写真システムの主流であったネガ=ポジ法の元祖であり、これ以降カロタイプ・湿板時代を経て乾板時代まで、英国（人）がカメラや写真技術の発展に貢献した事実は特筆すべきものです。

具体的なカメラの形は、簡略すると銀板写真や湿板写真で主流であったスライディングボックス・タイプから携行に便利な蛇腹付カメラへと移行し、この蛇腹方式のカメラも、当初のレンズ前板とベースボードがL字状に固定され、ピントグラス側を移動して焦点を合わせる、いわゆるDove Tail型（日本では一般的にテイルボードと呼んでいる。このタイプの蛇腹カメラは欧州大陸では英国に比較し長期間に亘り使用されていたため日本では大陸型組立暗箱と呼ばれている）から、レンズを装着した前板を前後に移動してフォーカシングを行う型にと変遷しています。

19 世紀後半から 20 世紀の初頭までは、イギリスの写真産業が最も繁栄した時期で世界の頂点に立っていたと言っても過言ではないでしょう。

因みに私が知っている当時のメーカー名を羅列してみると、まさに百花繚乱、Adams、Ashford、Beck、Chapman、Dallmeyer、Gandolfi、Hare、Hinton、Houghton、Kershaw、Lancaster、Lizars、Marion、McKellen、Newman & Guardia、Perkenson and Rayment、Reding & Gayles、Ross、Sands & Hunter、Shew、Sinclair、Talbot & Eamer、Taylor, Taylor & Hobson、Thornton-Pickard、Watson 等と枚挙に暇がないほどなのです。

Sanderson Camera 誕生のバックグラウンド

このような環境の中で、“The Sanderson Cameras”といわれるほどの名声を博したSanderson Cameraの生い立ちは、なんと言ってもMr. Frederick H. Sanderson(1856～1929) が発明し、1895年1月10日に取得した基本特許 (図1)が全てであると言えます。

この発明の特徴は、

1) いわゆるUniversal Swing Frontと称される二対のスロット（細長い穴）を持つ支柱でレンズボードを自由に任意の位置に固定し支えることで、ベースボードを移動することなく（現在のビューカメラに採用されているものとほぼ同等の）ほぼ完全なアオリ機構ができること。
2) レンズボード上での回転板(Compound Front)の採用

の二つであります。

彼がこの特許を取得するに至った経緯は、彼自身が一写真家として建築構造物の類を専門としており、当時のカメラには本人の希望するようなものがなかったために、自身で自分の目的にあうカメラを工夫・考案していくうちにこのUniversal Swing Font (Compound Front)機構を開発するに至ったのです。

Sanderson Cameraの種類

Sandersonと名の付くカメラは大別するとField Camera とHand Camera (Hand Camera については、Hand and Stand Cameraと呼ぶ説もありますが、当時のSanderson のカタログにはField Camera とHand Camera で載っているので、これを採用しています)の二つであるが、これらの技術は、初めにField Camera 上で試され、後にHand Camera に採用されました。

具体的には、1895年のRoyal Photographic Society (RPS)において、特許取得後すぐにOriginal Model (Field Camera)を発表していますが。Sanderson 社はもともと多くのメーカーの製品を取り扱っていたCambridge地方の一Dealerであったためか、特許取得の直後に、この特許をGeorge Houghton社（後のHoughton & Son社）に与え、以来Houghton社は1930年代にSandersonカメラの製造・販売が終了するまで、販売権と商標権、及製造権を保持していた訳です。図2はこの事実を証明するもので、翌1896年のThe British Journal Photographic Almanac (英国写真年刊)にGeorge Houghton & Son社が掲載した広告です。Sanderson 社製品の Solo Licensees and Manufacturers として表示されています。これがSandersonの名前が出た最初の広告で、従ってSanderson社自身の商標で販売したSanderson名のカメラはこの1年間という極短期間に売られたものしかなく、また後のものに比較しその完成度もあまり高くなかったと考えられるため、現存するカメラそのものが限られています。

研究会で報告する小林泰人さん

写真1～3はその数少ない現存するカメラの1台で、銘板にも、「E. R. SANDERSON & CO. PATENTEES & PHOTOGRAPHIC DEALERS CAMBRIDGE」とあり（写真3）、当時のSanderson 社を如実に説明している非常に珍しいオリジナル(Original)と呼ばれているモデルです。Patenteesとありますように、特許権所有者とうたっています。

当初SandersonのCameraは全てIslingtonにあったHolmes Brothersが今で言うOEMで製作し、G. Houghtonが販売していましたが、1904年に幾つかの他のメーカーと共にG.

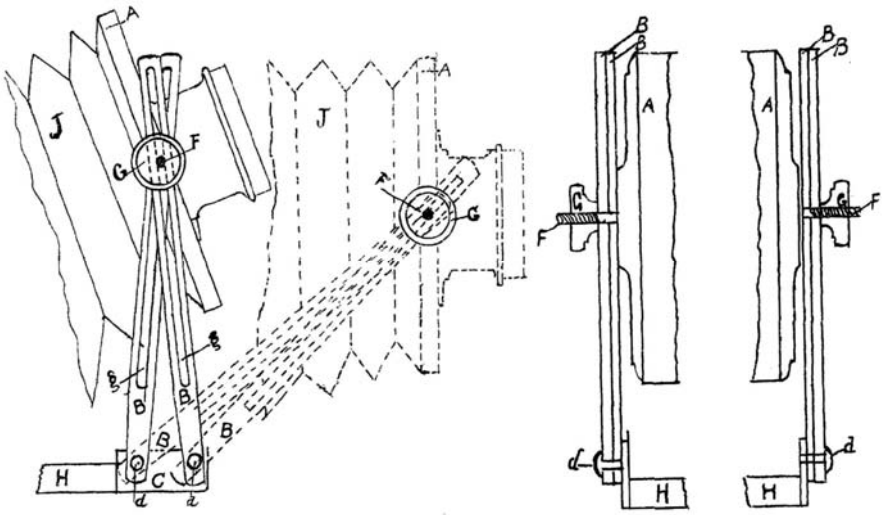


図1 Sandersonの英国特許GB189500613の図

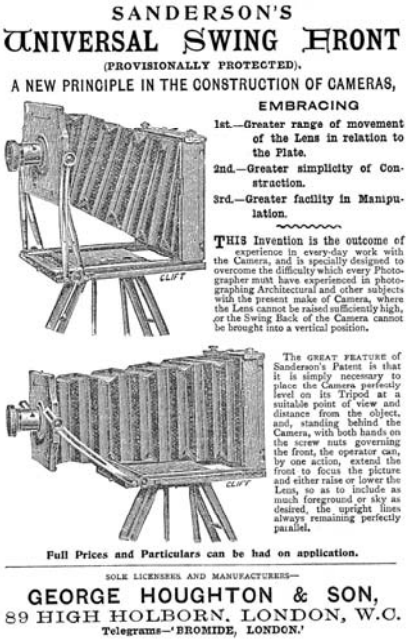


図2 George Houghton & Son社の広告。

Houghton に合併・吸収され、新たにHoughton Ltdが発足し、以後Houghton社の一部門として引き続き製造を担当しています。

現時点で判明しているこのField CameraとHand Cameraの2種類のそれぞれのモデルを発表年代順にまとめたものを表1 、表2に示します。

しかしながら、約40年間の長期に亘り製造・販売されているため、同じモデル名でも色々なバリエーションがあり、またその間にHoughton社自身の名前も色々と変遷しており、これらのコンビネーションの中で、個々のカメラの製造年を特定することは中々難しい作業ではあります。我々古典カメラの研究者或はコレクターとしては、種類と年代を判別することの重要性は申すまでもないことですが、ことSanderson Cameraについてこれらを判別する主なポイントとしては以下の点があげられます。

Field Cameraについては

1. カメラについているThe Sanderson Cameraを含めた銘板の種類
2. 蛇腹の形状と材質
3. 前面レンズパネルの支柱(Strut)の形状、材質並びにlockの有無
4. 同じく後部の支柱の有無、形状
5. 後部フォーカシング・ラックの機構
6. レンズボードの形状

Hand Camera については

1. カメラに付いているThe Sanderson Cameraを含めた銘板の種類
2. 蛇腹の形状と材質
3. レンズボードを支える支柱(Strut)の形状、材質
4. ベースボードの繰出板の形状、材質
5. 蛇腹を伸ばしたり、本体に収納したりする際のストッパーの形状
6. 蛇腹を伸ばした際に無限大で止める弓の形をしたバネ板(Bow spring)の有無、形状、取り付けられている位置およびその数
7. レンズボードを支える固定板(Front Standard)の材質と、それについているボルトの形状
8. レンズボードの固定具の形状と位置
9. レンズボードを上下する際に使用するナットの形状
10. 広角使用の際に開く本体上部のフラップの留め金の位置・形状
11. 背面板の固定具の形状と位置
12. フォーカシングガラスとフードの形状

この他にも、Sanderson CameraはBody とLensは別売りであり、さらに1904年ごろHoughton が発行したSanderson Camera のカタログで、例えばHand Camera の部で”Regular”、“Tropical”、”De Luxe”の価格表(表 3)を覗いて見ると、夫々のモデルで乾板(フォーマット)サイズによって4種類あり(モデルによっては5種類)、夫々に22種類のレンズの組合せが用意されているので、総ての組合せのモデルが販売されたと仮定すれば、単純に計算しても88のバリエーションがあることになります。またこの場合はEnsign-Sector Shutter との組合せのみのケースで、このカタログでは他にもKoilosやCompound Shutterとのコンビネーションも紹介されているので、その種類たるや膨大なものになり、研究者やコレクターにとっては実に頭の痛い問題なのです。

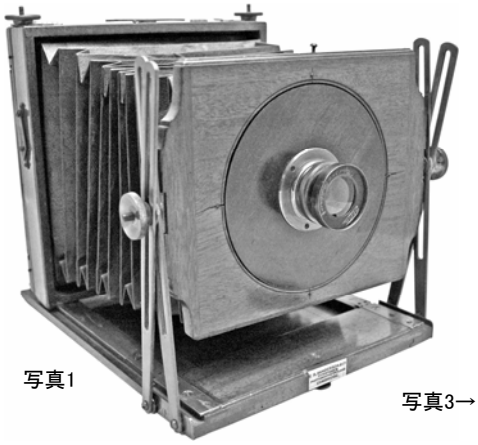


写真1

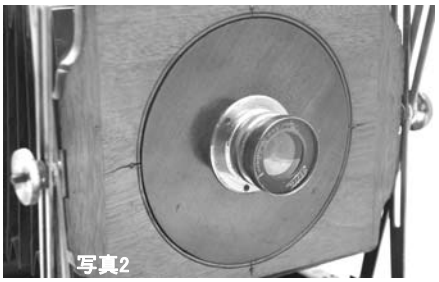


写真2

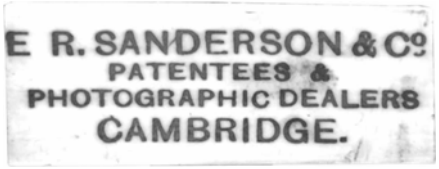


写真3→

写真1-3 オリジナルモデル(Original Model)。数少ないSanderson社自身の商標(写真3)で1895年に発売したカメラ。サンダーソンの英国特許の図とそっくり同じである。

社名の変遷

種類の判別に欠かせぬポイントとしてHoughtonの社名があります。この社名の変遷を紹介すると表4のようになります。

この変遷を知っておきますとカメラについているプレートが其の時の会社によって少しずつ違っているので、カメラの判別の一助になるわけです。

先に一部をご紹介したHoughton社のカタログでSanderson Cameras の魅力は、Sanderson Camera が技術的に全く他社の追随を許さぬ写真家の理想を実現したカメラであると、繰り返し強調しています(図4、5、6、7、8、9、10)。

事実、英国製の、特にHand Cameraでは、約40年近くの長きに亘り殆どその原型を保ちながら生産が続けられたカメラはSanderson以外には見当たりません。またその生産台数も他に匹敵するHand Cameraを見つけることは困難です。

然しながら、何故現在でもSanderson Camera がクラッシックカメラ愛好家やコレクターに根強い人気を博しているのでしょうか。それはやはり、申し上げるまでもないことですが、技術的優位性もさることながら、大英帝国が世界中から集めた厳選された材料、特にマホガニーやチーク材を用いたトロピカル・タイプやデラックス・タイプに見ることができる、工芸品的なクラフトマンシップの最高峰の巧みの技が施されたカメラであるということだと思うのです。

長期間乾燥させた柾目材の組みあわせで狂いの無い組立をし、さらに真鍮の埋め込みは研ぎ出し工法で寸分の隙間も無く、止めビスの溝は全て一定方向に揃っている等々、見る者を圧倒します。競合品であるジェームス・シンクレア社のシンクレア・ウナ・トロピカルやスコットランドのリザース社のチャレンジ・トロピカル等と共に、まさに究極の製品であります。

この点に関しての詳細は限りがありませんので、いつか又これら3社の製品を比較しながらお話できればと考えております。

今回の話が皆様の研究やコレクションの参考となれば幸甚です。そして一人でも多くの方が、木製カメラに興味を持っていただければと願うしだいです。

表1 フィールドカメラのモデル名と発売年

Year	Model
1895	Original (sold by E.R. Sanderson & Co.)
1896	A Pattern
1898	B Pattern
1899	Popular or Regular Popular
1901	Royal
1902	Compact Popular
1903	Junior Popular
1904	Tropical Popular

表2 ハンドカメラのモデル名と発売年

Year	Model
1899	Original Model
1900	Original Model 2nd Version
1902	Regular
1902	De Luxe
1902	Tourist
1902	Roll Film Early Version
1903	Junior
1903	Roll Film Later Version
1904	Tropical
1904	Tropical De Luxe
1904	Tropical Junior
1905	Post-Card
1909	Tropical Roll Film
1928	Regular, Last Model (with Ensign Sanderson Plaque)

表4 Houghton社の社名の変遷

年	社名の変遷
1834	Claudet & Houghton設立。後、英国に於けるDaguerreotype processのLicenceesとなる
c1860	George Houghton & Son
1903	GeorgeHoughton & Son Ltd.
1904	Houghton Ltd.
1915	*Houghton Ltd. sold their manufacturing business to Houghton-Butcher Manufacturing Co.*
1925	Houghton-Butcher (Great Britain) Ltd.
1930	Ensign Ltd.

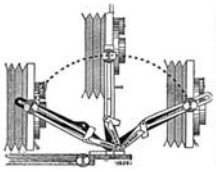
表3 Houghton 社が1904年頃発行したサンダーソンのカタログ、ハンドカメラ（レギュラー、トロピカル、デラックス）の部に掲載されているプライスリスト

Price List of Sanderson "Regular," "Tropical" and "De Luxe" Model Cameras.

No.	DESCRIPTION.	No.	Model.	4¼ × 3¼ in.	5 × 4 in. or 9 × 12 cm.	6½ × 4¼ in.*	7 × 5 in., or 18 × 13 cm.*	8½ × 6½ in.*
				£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1k	**Camera, complete with "Ensign" Anastigmat Lens, Series VIIn., F/7·7, "Ensign-Sector" Shutter** *(unless otherwise mentioned)*, **Brilliant Finder, Level, Antinous Shutter Release, and 3 Double Plate Holders** *The ¼-plate Camera is fitted with the 4¾ in. Lens, the 5 × 4 Camera with the 6 in. Lens, the ½-plate Camera with the 8½ in. Lens and No. 2a "Koilos" Shutter, and the ¼-plate Camera with the 10½ in. Lens and No. 3 "Koilos" Shutter.*	1k	Regular ..	6 10 0	7 10 0	10 10 0	11 10 0	18 0 0
			Tropical ..	7 15 0	9 0 0	12 0 0	13 0 0	—
			De Luxe ..	10 0 0	11 10 0	18 0 0	19 0 0	—
1t	**Ditto, ditto, with "Ensign" Anastigmat Lens, Series VI. (3 foci), F/6. "Ensign-Sector" Shutter, etc.** *The ¼-plate Camera is fitted with the 4¾ in. Lens, the 5 × 4 Camera with the 6 in. Lens, and the ½-plate Camera with the 7½ in. Lens and No. 3 "Koilos" Shutter.*	1t	Regular ..	7 10 0	8 10 0	11 12 6	12 12 6	—
			Tropical ..	8 15 0	10 0 0	13 2 6	14 2 6	—
			De Luxe ..	11 0 0	12 10 0	19 2 6	20 2 6	—
1w	**Ditto, ditto, with "Ensign" Anastigmat Lens, Series V. (3 foci), F/5·5. "Ensign-Sector" Shutter, etc.** *The ¼-plate Camera is fitted with the No. 0 Lens (combined focus, 4¾ in., front focus, 10 in., back focus, 7 in.), the 5 × 4 Camera with the No. 1 Lens (combined focus, 6 in., front focus, 11½ in., back focus, 9 in.), and the ½-plate Camera with the No. 2 Lens (combined focus, 7½ in., front focus, 13½ in., back focus, 11 in.). and No. 3 "Koilos" Shutter.*	1w	Regular ..	8 7 6	9 5 0	13 0 0	14 0 0	—
			Tropical ..	9 12 6	10 15 0	14 10 0	15 10 0	—
			De Luxe ..	11 17 6	13 5 0	20 10 0	21 10 0	—
1z	**Ditto, ditto, with "Ensign" Anastigmat Lens Series IV. (3 foci), F/4·5. "Ensign-Sector" Shutter, etc.** *The ¼-plate Camera is fitted with the No. 0 Lens (combined focus, 4¾ in., front focus, 10½ in., back focus, 6½ in.), the 5 × 4 Camera with the No. 1 Lens (combined focus, 6 in., front focus, 13 in., back focus, 8 in.), and No. 3 "Koilos" Shutter, and the ½-plate Camera with the No. 2 Lens (combined focus, 7½ in., front focus 16 in., back focus, 10 in.) and No. 3 "Koilos" Shutter.*	1z	Regular ..	9 15 0	12 0 0	16 10 0	17 10 0	—
			Tropical ..	11 0 0	13 10 0	18 0 0	19 0 0	—
			De Luxe ..	13 5 0	16 0 0	24 2 6	25 2 6	—
10d	**Ditto, ditto, with "Aldis-Plano" Anastigmat Lens, F/6·8. "Ensign-Sector" Shutter, etc.** ..... *The ¼-plate Camera is fitted with the 6 in. Lens, the 5 × 4 Camera with the 7 in. Lens, and the ½-plate Camera with the 8 in. Lens and No. 2 "Koilos" Shutter.*	10d	Regular ..	7 0 0	8 2 6	11 15 0	12 15 0	—
			Tropical ..	8 5 0	9 12 6	13 5 0	14 5 0	—
			De Luxe ..	10 10 0	12 2 6	19 5 0	20 5 0	—
5L	**Ditto, ditto, with "Cooke-Luxor" Anastigmat Lens, F/6·8. "Ensign-Sector" Shutter, etc.** ..... *The ¼-plate Camera is fitted with the 5 in. Lens, the 5 × 4 Camera is fitted with the 6 in. Lens.*	5L	Regular ..	7 17 6	9 0 0	—	—	—
			Tropical ..	9 2 6	10 10 0	—	—	—
			De Luxe ..	11 7 6	13 0 0	—	—	—
8	**Ditto, ditto, with "Zeiss Double Protar" Lens, Series VII., F/6·3. "Ensign-Sector" Shutter, etc.** *The ¼-plate Camera is fitted with the No. 4 Lens, the 5 × 4 with No. 7 Lens, and the ½-plate Camera with the No. 10 Lens and No. 3 "Koilos" Shutter.*	8	Regular ..	13 10 0	16 0 0	21 15 0	22 15 0	—
			Tropical ..	14 15 0	17 10 0	23 5 0	24 5 0	—
			De Luxe ..	17 2 6	20 2 6	29 7 6	30 7 6	—
8a	**Ditto, ditto, with "Zeiss Double Protar" Lens. Series VII., F/6·3. "Ensign-Sector" Shutter, etc.** *The 5 × 4 Camera is fitted with the No. 4 Lens, and the ½-plate Camera with the No. 7 Lens.*	8a	Regular ..	—	14 10 0	18 15 0	19 15 0	—
			Tropical ..	—	16 0 0	20 5 0	21 5 0	—
			De Luxe ..	—	18 12 6	26 7 6	27 7 6	—
8b	**Ditto, ditto, with "Zeiss Tessar" Lens. Series IIb., F/6·3. "Ensign-Sector" Shutter, etc.** ..... *The ¼-plate Camera is fitted with the No. 4 Lens, the 5 × 4 Camera with the No. 5 Lens, and the ½-plate Camera with the No. 5a Lens and No. 3 "Koilos" Shutter.*	8b	Regular ..	10 10 0	11 17 6	17 10 0	18 10 0	—
			Tropical ..	11 15 0	13 7 6	19 0 0	20 0 0	—
			De Luxe ..	14 2 6	16 0 0	25 2 6	26 2 6	—
8c	**Ditto, ditto, with "Zeiss Double Amatar" Lens. Series IX., F/6·8. "Ensign-Sector" Shutter, etc.** *The ¼-plate Camera is fitted with the No. 4 Lens, the 5 × 4 Camera with the No. 5 Lens, and the ½-plate Camera with the No. 7 Lens and No. 2a "Koilos" Shutter.*	8c	Regular ..	11 0 0	12 7 6	17 7 6	18 7 6	—
			Tropical ..	12 5 0	13 17 6	18 17 6	19 17 6	—
			De Luxe ..	14 12 6	16 10 0	25 0 0	26 0 0	—
5	**Ditto, ditto, with "Cooke" Lens. Series III., F/6·5. "Ensign-Sector" Shutter, etc.** ..... *The ¼-plate Camera is fitted with the 5 in. Lens, the 5 × 4 with the 6½ in. Lens, and the ½-plate with the 7½ in. Lens and No. 2 "Koilos" Shutter.*	5	Regular ..	9 17 6	11 7 6	15 12 6	16 12 6	—
			Tropical ..	11 2 6	12 17 6	17 2 6	18 2 6	—
			De Luxe ..	13 10 0	15 10 0	23 5 0	24 5 0	—
5a	**Ditto, ditto, with "Cooke" Lens, Series II., F/4·5. "Ensign-Sector" Shutter, etc.** ..... *The ¼-plate Camera is fitted with the 5 in. Lens and No. 2 "Koilos," the 5 × 4 with the 6 in. Lens and No. 3 "Koilos," and the ½-plate with the 8 in. Lens and No. 4 "Koilos" Shutter.*	5a	Regular ..	11 7 6	13 7 6	17 15 0	18 15 0	—
			Tropical ..	12 12 6	14 17 6	19 5 0	20 5 0	—
			De Luxe ..	15 0 0	17 10 0	25 7 6	26 7 6	-
	For Cameras fitted with "Goerz," "Dallmeyer," "Beck Isostigmar," "Voigtlander," "Ross," "Aldis" and "Watson" Lenses, see following pages.							
	EXTRAS.							
	* Extra for 3 Mahogany Book-form Double Slides, in place of 3 Double Slides, as listed with the "Regular" and "De Luxe" Models		.....	0 15 0	0 15 0	—	—	—
	† Extra for 3 "Best Quality" Spanish Mahogany Book-form Double Slides, in place of 3 Double Plate Holders, as listed with the "Regular" and "De Luxe" Models		.....	1 15 0	1 15 0	1 10 0†	1 10 0†	1 15 0
	Extra for 3 Teak Book-form Double Slides, in place of 3 Double Plate Holders, as listed with the "Tropical" Model		.....	1 10 0	1 10 0	1 10 0	1 10 0	—
	Extra for "Koilos" or "Compound" Shutter in place of "Ensign-Sector" Shutter as listed		.....	0 15 0	0 15 0	0 15 0	0 15 0	—
	‡ Extra for "Adams" Brilliant View Finder on the Nos. 1k, 1t, 1w, 1z, 10d, 5L and o "Regular" Model Camera, in place of Bright Finder as listed		.....	0 7 6	0 7 6	0 7 6	0 7 6	—
	N.B.—The "Koilos" Shutter is always supplied to Cameras fitted with Lenses requiring a larger Shutter than the "Ensign-Sector." For Extra Slides, Cases, etc., see pages 24 and 25.							

No.	DESCRIPTION.	No.	Model.	4¼ × 3¼ in.	5 × 4 in. or 9 × 12 cm.	6½ × 4¼ in.*	7 × 5 in., or 18 × 13 cm.*	8½ × 6½ in.*
				£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
4	**Camera, complete, with "Goerz Dagor" Anastigmat Lens, Series III., F/6·8, "Ensign-Sector" Shutter** *(unless otherwise mentioned)*, **Brilliant Finder, Level, "Antinous" Shutter Release and 3 Double Plate Holders** ..... *The ¼-plate Camera is fitted with the No. 0 Lens, the 5 × 4 with the No. 1 Lens, the ½-plate with the No. 2 Lens, and No. 2a "Koilos" Shutter, and the ¼-plate with the No. 4 Lens and No. 3 "Koilos" Shutter.*	4	Regular ..	10 17 6	12 17 6	17 7 6	18 7 6	26 5 0
			Tropical ..	12 2 6	14 7 6	18 17 6	19 17 6	—
			De Luxe ..	14 10 0	17 0 0	25 0 0	26 0 0	—
4a	**Ditto, ditto, with "Goerz Celor" Anastigmat Lens, Series I.B., F/4·5, "Ensign-Sector" Shutter, etc.** .. *The ¼-plate Camera is fitted with the No. 0 Lens, the 5 × 4 with the No. 1 Lens and No. 3 "Koilos," and the ½-plate with the No. 2 Lens and No. 3 "Koilos" Shutter.*	4a	Regular ..	11 10 0	14 15 0	18 5 0	19 5 0	—
			Tropical ..	12 15 0	16 5 0	19 15 0	20 15 0	—
			De Luxe ..	15 2 6	18 17 6	25 17 6	26 17 6	—
4c	**Ditto, ditto, with "Goerz Syntor" Anastigmat Lens, Series I.D., F/6·8, "Ensign-Sector" Shutter, etc.** *The ¼-plate Camera is fitted with the No. 0 Lens, the 5 × 4 with the No. 1 Lens, and the ½-plate with the No. 2 Lens and No. 2a "Koilos" Shutter.*	4c	Regular ..	8 17 6	10 7 6	14 12 6	15 12 6	—
			Tropical ..	10 2 6	11 17 6	16 2 6	17 2 6	—
			De Luxe ..	12 10 0	14 10 0	22 5 0	23 5 0	—
3a	**Ditto, ditto, with "Dallmeyer" Stigmatic Lens, Series IV., F/6·3, "Ensign-Sector" Shutter, etc.** .... *The ¼-plate Camera is fitted with the No. 1 Lens, the 5 × 4 with the No. 2 Lens, and the ½-plate with the No. 3 Lens and No. 2 "Koilos" Shutter.*	3a	Regular ..	9 2 6	10 12 6	15 2 6	16 2 6	—
			Tropical ..	10 7 6	12 2 6	16 12 6	17 12 6	—
			De Luxe ..	12 15 0	14 15 0	22 15 0	23 15 0	—
3	**Ditto, ditto, with "Dallmeyer" Stigmatic Lens, Series II., F/6, "Ensign-Sector" Shutter, etc.** ..... *The ½-plate Camera is fitted with the No. 2 Lens, the 5 × 4 Camera with the No. 3 Lens and No. 2 "Koilos" and the ½-plate Camera with the No. 4 Lens and No. 3 "Koilos" Shutter.*	3	Regular ..	11 17 6	14 10 0	19 0 0	20 0 0	—
			Tropical ..	13 2 6	16 0 0	20 10 0	21 10 0	—
			De Luxe ..	15 10 0	18 12 6	26 12 6	27 12 6	—
6r	**Ditto, ditto, with Beck "Isostigmar" Lens, Series II. (3 foci), F/5·8, "Ensign-Sector" Shutter, etc.** .. *The ¼-plate Camera is fitted with the No. 3 Lens, the 5 × 4 Camera with the No. 4 Lens, and the ½-plate Camera with the No. 5 Lens and No. 3 "Koilos" Shutter.*	6r	Regular ..	8 12 6	10 0 0	14 5 0	15 5 0	—
			Tropical ..	9 17 6	11 10 0	15 15 0	16 15 0	—
			De Luxe ..	12 5 0	14 2 6	21 17 6	22 17 6	—
7	**Ditto, ditto, with "Voigtlander" Collinear Lens, Series III., F/6·8, "Ensign-Sector" Shutter, etc.** .... *The ¼-plate Camera is fitted with 4¾ in. Lens, the 5 × 4 Camera with 6 in. Lens, and the ½-plate Camera with 7½ in. Lens and No. 2 "Koilos" Shutter.*	7	Regular ..	11 0 0	13 0 0	17 15 0	18 15 0	—
			Tropical ..	12 5 0	14 10 0	19 5 0	20 5 0	—
			De Luxe ..	14 12 6	17 2 6	25 7 6	26 7 6	—
9	**Ditto, ditto, with "Ross" Homocentric Lens, Series III., F/6·3, "Ensign-Sector" Shutter; etc.** .... *The ¼-plate Camera is fitted with the No. 1 Lens, the 5 × 4 Camera with the No. 3 Lens, and the ½-plate Camera with the No. 4 Lens and No. 2 "Koilos" Shutter.*	9	Regular ..	9 17 6	11 7 6	15 12 6	16 12 6	—
			Tropical ..	11 2 6	12 17 6	17 2 6	18 2 6	—
			De Luxe ..	13 10 0	15 10 0	23 5 0	24 5 0	—
10	**Ditto, ditto, with Aldis "Anastigmat" Lens, Series II., F/6, "Ensign-Sector" Shutter; etc.** ..... *The ¼-plate Camera is fitted with the No. 2 Lens, the 5 × 4 Camera with the No. 3 Lens and No. 3 "Koilos" Shutter, and the ½-plate Camera with No. 4 Lens and No. 3 "Koilos" Shutter.*	10	Regular ..	7 12 6	11 0 0	14 12 6	15 12 6	—
			Tropical ..	8 17 6	12 10 0	16 2 6	17 2 6	—
			De Luxe ..	11 5 0	15 2 6	22 5 0	23 5 0	—
11	**Ditto, ditto, with "Watson Holostigmat" Lens, Series I., F/6·1, "Ensign-Sector" Shutter, etc.** ..... *The ¼-plate Camera is fitted with the No. 2 Lens, the 5 × 4 with the No. 4 Lens, and the ½-plate with the No. 7 Lens and No. 3 "Koilos" Shutter.*	11	Regular ..	11 0 0	13 0 0	17 5 0	18 5 0	—
			Tropical ..	12 5 0	14 10 0	18 15 0	19 15 0	—
			De Luxe..	14 12 6	17 2 6	24 17 6	25 17 6	—
0	**Camera, complete with Bright Finder, Level and 3 Double Plate Holders, but without Lens or Shutter** ..	0	Regular ..	5 10 0	6 10 0	9 5 0	10 5 0	14 10 0
			Tropical ..	6 15 0	8 0 0	10 15 0	11 15 0	—
			De Luxe ..	9 2 6	10 12 6	16 17 6	17 17 6	—
	EXTRAS.							
	* Extra for 3 Mahogany Book-form Double Slides, in place of 3 Double Slides as listed with the "Regular" and "De Luxe" Models		.....	0 15 0	0 15 0	—	—	—
	† Extra for 3 "Best Quality" Spanish Mahogany Book-form Double Slides, in place of 3 Double Plate Holders as listed with the "Regular" and "De Luxe" Models		.....	1 15 0	1 15 0	1 10 0†	1 10 0†	1 15 0
	Extra for 3 Teak Book-form Double Slides, in place of 3 Double Plate Holders, as listed with the "Tropical" Model		.....	1 10 0	1 10 0	1 10 0	1 10 0	—
	Extra for "Koilos" or "Compound" Shutter in place of "Ensign-Sector" Shutter, as listed		.....	0 15 0	0 15 0	0 15 0	0 15 0	—
	‡ Extra for "Adams" Brilliant View Finder on the Nos. 1k, 1t, 1w, 1z, 10d, 5L and o "Regular" Model Camera, in place of Bright Finder as listed		.....	0 7 6	0 7 6	0 7 6	0 7 6	—
	N.B.—The "Koilos" Shutter is always supplied to Cameras fitted with Lenses requiring a larger Shutter than the "Ensign-Sector." For Extra Slides, Cases, etc., see pages 24 and 25.							

The "Sanderson."



This diagram shows a portion of the universal swing movement and the locking action. It shows the camera front in three different upright positions. The slotted struts swing from a common centre, and the lens is always swung on its axis. It is, of course, obvious that the front can be stopped at any point on the arc shown by the arrow heads, and at the same time can be raised or lowered in any position within the arc.

Advantages of the "Sanderson" over all other Cameras.

1. Universal Swing Front instantly fixed in any desired position, and controlled completely from the back of the Camera.
2. Universal Swing Front with lens carrying front always held centrally, therefore possessing greater rigidity when fixed in any position.
3. Universal Swing Front with lens always swung on its axis; any other method of swinging the lens means refocussing for each adjustment of the swing movement.

The "Sanderson" is not a cheap camera. The most inexpensive model costs £5 5s., but it is a camera that is distinct from every other piece of apparatus on the market. It is made in London by British workmen, and finished and fitted throughout in a manner that speaks volumes for the excellence of British workmanship.

It is not workmanship alone that has made the "Sanderson" the success it is. No camera is protected by so many patents, and the utility of the camera is dependent upon these various protected movements working in conjunction with one another. The swing movement would be of little use if the front could not be locked readily at any point, and the extreme rise would be of little use without the patented body and the method of preventing cutting off. However, these are only two of the features that the "Sanderson" shares with no other camera, and which have helped to place it in the premier position which it undoubtedly holds.

図4 Houghton社のカタログーその1

The "Sanderson."

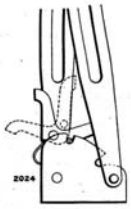
SOME IMPORTANT POINTS FOR THE INTENDING PURCHASER OF A SANDERSON CAMERA.

EASE WITH WHICH A "SANDERSON" MAY BE USED FOR ORDINARY SUBJECTS.

There is an impression, which, however, is quite unfounded, that a "SANDERSON" CAMERA is rather more difficult to use or manage than are those of the ordinary type. This is very far from being the case; and we have prepared a few brief instructions which we hope will be of some service.

For all ordinary work the Camera is manipulated the same as any other instrument, **only it should be placed level upon its support.** The Camera is set up much in the same way as any other Camera, and the Front automatically fixes itself in an upright position, and exactly parallel with the focussing screen. If with the Front so fixed, the focal length is not great enough for the Lens in use, all that is necessary is to rack out the Frame by the Rack and Pinion, until the proper extension is obtained, just the same as with an ordinary Camera. Should, however, the extension be too great for the Lens in use, instead of racking out the Frame, simply release the screws on either side of the Camera Base and push the Body forward past the focal point, and then, by the aid of the Rack and Pinion, adjust the focus of the Lens. The "A" Pattern and "REGULAR POPULAR" Cameras are each provided with a Side Swing, and the back is actuated by Rack and Pinion, in place of the usual push forward movement for Wide-Angle Work.

THE AUTOMATIC LOCKING MOVEMENT.



The slotted arms carrying the front are provided with a device which locks them automatically in the upright position with the front parallel to the focussing screen.

When it is desired to bring the Universal Swinging Backward or Forward movement into play all that is necessary is to press down the levers in connection with the locking catches so as to throw them out of gear (as shown by the dotted line in the diagram) and the Universal Swinging Front can then be brought into action, and swung freely in any direction.

By means of the locking catches the front can, if desired, again be automatically locked in the extended position (*i.e.*, with the slotted arms thrown forward beyond the baseboard as far as possible), so that the lens is exactly central to the plate.

図5 Houghton社のカタログーその2

The "Sanderson."

WIDE-ANGLE MOVEMENT.

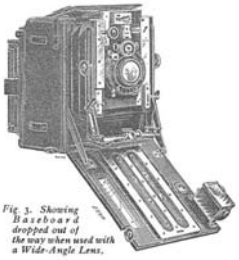


Fig. 3. Showing Baseboard dropped out of the way when used with a Wide-Angle Lens.

One of the many advantages of the "Sanderson" is easily demonstrated when the camera is used for short-focus or wide-angle work. When the short-focus lens is in position the baseboard can be dropped, as shown in the illustration. The adjustment is made instantly and the baseboard is outside the field of vision of even the shortest focus lens. An additional travelling baseboard enables the wide-angle lens to be racked in and out for accurate focussing (see "New Movements" on preceding page, and the illustration (Fig. 3) on this page.)

AXIAL LENS SWING.

The most important feature of the "Sanderson" Swing Front is that the Lens is always swung on its axis. No so-called swing front can be of the slightest practical use if the lens is not pivoted centrally.

The "Sanderson" is the only camera in existence having this feature. A glance at the illustrations will show that the lens always swings on its axis and thus obviates refocussing after using the swinging movement. Some of the would-be swing fronts are mere hinged fronts.

OPTIONAL SWING FRONT.

The swing front is here shown in use with the camera in its normal position at the infinity mark. The two small bolts with the bullet ends, shown on the camera front just below the lens, control this movement. By simply withdrawing them the camera front is permitted to swing to any degree on its central pivots, and is secured in any required position by the milled nuts. (See Fig. 4.)

These locking bolts used in conjunction with the slotted struts form an important feature of the "Sanderson" patent. A lens that can be swung but not locked at any required point is useless.

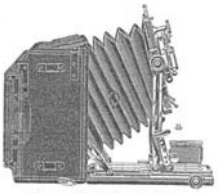


Fig. 4. Showing the Swing Front.

図6 Houghton社のカタログーその3

The "Sanderson."

ENORMOUS EXTENSION.

An enormous extension of fifteen inches in the ½-plate size is produced by means of the travelling frame in conjunction with the slotted arms, in fact, sufficient to use the single combination of the lens for copying the same size or for telephotographic work. (See Fig. 5.)

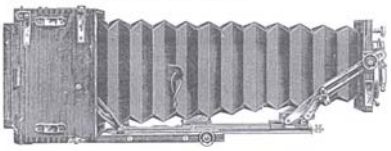


Fig. 5. Showing extension obtainable.

ENORMOUS RISE.

A special feature of the "Sanderson" Hand Camera is the enormous rise of front obtainable (see fig. 6) which is a special advantage for architectural work. In confined spaces, it does away entirely with the tilting of the camera, and the necessity of swinging the back.

A good rising front is absolutely essential when using an ordinary short-focus or a wide-angle anastigmat lens. It means all the difference in the world between a good picture and a bad one.

In the "Sanderson," the front is only permitted to rise in strict parallelism with the focal plane. Thus all risk of imperfect adjustment is entirely eliminated.

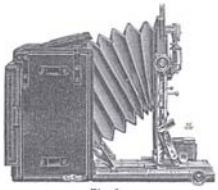


Fig. 6.

It will thus be seen that the designer has not only furnished this camera with the Universal Swing Front, but has by means of a most simple device been successful in combining with it the advantages of

1st—A Rigid Fixed Front.
2nd—A Rising and Falling Front of great range, which is in strict parallelism to the focal plane.
3rd—Rising and Falling Front with an optional Swing movement.
4th—The Universal Rising, Falling, Swinging, and Backward and Forward Movement, as provided in the "Sanderson" original patent.
5th—An Axially Swung Lens, ensuring absolute rigidity, no matter what position the front is placed in.

図7 Houghton社のカタログーその4

The "A" Pattern Sanderson.

FINEST AND MOST USEFUL FIELD CAMERA IN EXISTENCE.

Fig. 8. "A" Pattern Camera, showing optional Swing Front in use.

The "A" Pattern Sanderson is absolutely indispensable to the expert photographer who frequently has to take difficult and unusual subjects.

For architectural work it fulfils every requirement and can be relied upon to give perfectly satisfactory pictures under any conditions.

Every convenience and facility for work has been carefully considered and carried out.

NO EXPERT OR PROFESSIONAL PHOTOGRAPHER SHOULD BE WITHOUT AN "A" PATTERN SANDERSON CAMERA IN ONE OF THE LARGE SIZES.

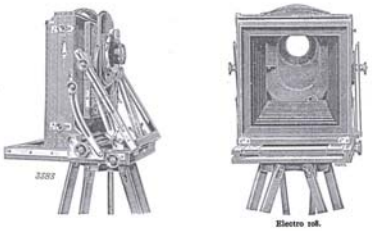
The "A" Pattern Sanderson Cameras are high-class London-made instruments; the materials used in their construction are specially selected, and neither in design nor workmanship have they a superior.

They include in their construction all the patented improvements described on the preceding pages, making them the most perfect instrument it is possible to obtain.

Though the build and weight have been kept down to the utmost possible degree, there has been no attempt to bring the dimensions of this instrument within the cramped limits adopted by many camera makers, who have considered lightness and compactness of far greater importance than usefulness and efficiency.

図8 Houghton社のカタログーその5

The "Sanderson."



Electro 108.

Fig. 5.—"A" Pattern Camera showing shortest Extension. *Fig. 6.—"A" Pattern Camera showing Lens raised at shortest extension.*

Wide-Angle Movement.—For no class of Photography is the "SANDERSON" better adapted than for short-focus or wide-angle work; in fact, it owes its very existence to the deficiencies found in Cameras of the so-called wide-angle type. The new Patent Body, described on next page, still further improves the "SANDERSON" for this class of work.

The Body can be moved forward upon the Baseboard if so desired, and in the ½-plate size the Lens brought within 2¾ inches of the Focussing Screen; hence the Camera is adapted to take the shortest-focus Lens it is possible to use on a ½-plate. (Probably there is no Lens made of a focus within this limit that will cover a Plate 6½ × 4¾ inches.)

The most important feature, however, is that when the Lens is even as close to the Focal Plane as above stated, and the Ground Glass is fixed in a vertical position, it is possible to raise the Lens to the top edge of the Plate without the slightest fear of the Bellows cutting off the image, as is the case with so many Cameras supposed to be specially designed for this purpose. In like manner, the Lens may be dropped to the lowest possible point, with the same satisfactory result. To prove this point we give two illustrations, Figs. 5 and 6. The one shows the Lens very close to the Focal Plane and raised to the top of the Plate, the other shows the back and inside of the Camera with the Reversing Frame removed, and demonstrates that there is no obstruction to the image.

Great Rise.—At a nominal focal length, the objective may even be raised very considerably above the top of the Plate; thus with the use of modern Lenses, some of which possess extraordinary covering power, it is possible to successfully photograph objects of a class that could never have been attempted with the ordinary form of Camera.

図9 Houghton社のカタログーその6

The "Sanderson."

DESCRIPTION OF THE "SANDERSON" HAND CAMERA.

OWING to the great family likeness, as far as the external appearance is concerned, between the "Sanderson" Hand Camera and some of the other cameras now before the public, it is desirable to point out, as briefly as possible, wherein the great difference of the "Sanderson" lies, and to demonstrate some of the special advantages, which may not be apparent at first sight.

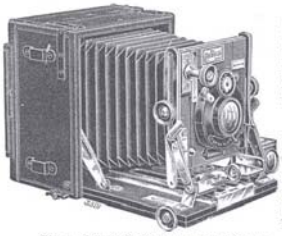


Fig. 1.—Open ready for use as a Hand Camera.

Much ingenuity has been expended in embodying in one instrument, a camera that is perfect for both hand and stand work, without sacrificing any valuable qualities in whatever capacity it is intended to be used.

It is therefore claimed, without hesitation, that the "Sanderson" Hand Camera fulfils all the conditions necessary, far more perfectly than any other instrument that ever yet has been placed at the disposal of the photographer.

The "Sanderson" is above everything, absolutely simple. It can be used by a novice or an expert with equal success, for none of the movements in reserve complicate the action of the Camera for snapshot use, nor are they likely to confuse a beginner.

An instrument that claims to be a universal camera, must possess the following qualifications:—

It must be light and compact.
It must be ready for use at the shortest notice.
It must have a first-class lens.
It must be capable of using long or short-focus lenses.
It must have a long extension.
It must have an efficient shutter.
It must have a focussing index.
It must have all the necessary adjustments of rising and falling front.
It must have a swing front and the lens must be swung on its axis.
It must have a reversing back and focussing screen.
It must have a good finder.
It must be capable of taking Films or Plates.
It must be unobtrusive in appearance when folded up.
It must be simple of construction, and easy to manipulate.
It must be well made.

The "Sanderson" Patent Improved Universal Swing Front has rendered it possible to design a camera which fulfils all the foregoing conditions in a very marked degree, and it is the only camera that, really **and honestly** fulfils all these conditions.

図10 Houghton社のカタログーその7

写真4は1904年版A パターン(A Pattern)、写真5はそのフロント部の詳細 (Front details)

写真６は1904年頃 トロピカル・サンダーソン (c1904 Tropical Sanderson)、写真7はそのフロント詳細と銘板(Front & Plaque)

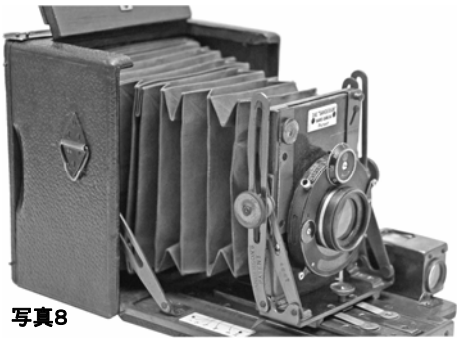
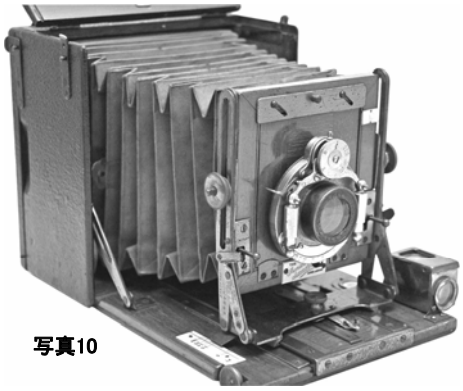


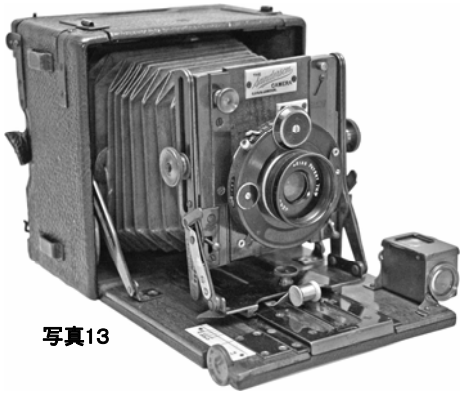
写真8は1900年 オリジナル・セカンド・バージョン (Original 2nd Version)、写真9はそのフロント部の詳細と銘板(Front details & Plaque)

写真10は1903年版ジュニア・サンダーソン (1903 Junior Sanderson)

写真11は1906年版ジュニア・サンダーソン (1906 Junior Sanderson)

写真12は1906年版ジュニアのフロント詳細と銘板(1906 Junior Sanderson Front & Plaque)





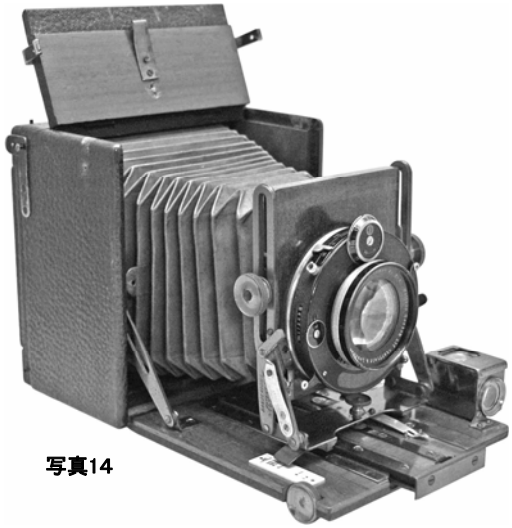


写真13は1906年のレギュラー(Regular)、

写真14(はレギュラー後期モデル(Regular Later Model)、

写真15は後期モデルのフロント部と銘板 (Regular Later model Front & Plaque)

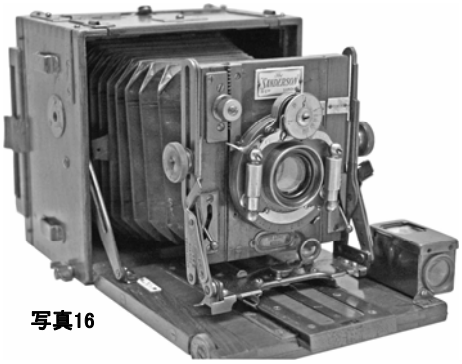


写真16

写真17

写真16は1906年頃のデラックスモデル(De Luxe Model)。写真17はそのフロントで上部のサンダーソン名とレンズ下のDe Luxeの二つの銘板を示す。

←写真21

写真20

写真18

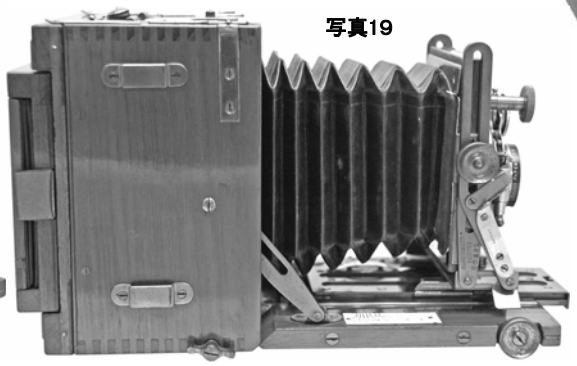


写真19

写真18は1909年頃のデラックスモデル(c1909 De Luxe Model)、写真19はその側面(side view of the De Luxe)、写真２０はスウィングダウン(Swing down) したところ。カメラ上部蓋の裏側に英国製とエンサインの銘板(Inside plaque-British made & Ensign Trade mark)がある。
レンズの下にはトロピカルモデルの銘板がある(写真21)。

写真22

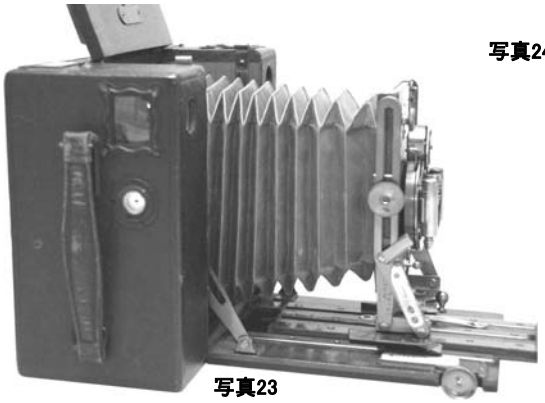


写真23

写真24→

写真22 1903年 ロールフィルム・サンダーソン (1903 Roll Film Sanderson)
写真23はその側面(Side view of the Roll Film Sanderson)
写真24はその銘板(Plaque)

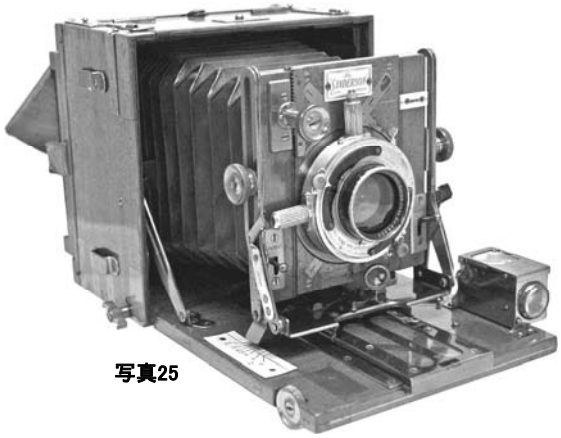


写真25

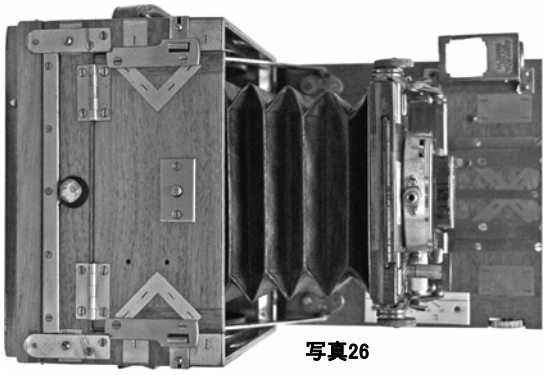


写真26

写真25 トロピカル・デラックス (Tropical De Luxe)

写真26はその上面の写真(Top View of the Tropical De Luxe)

写真27は側面の写真(Side view of the Tropical De Luxe)

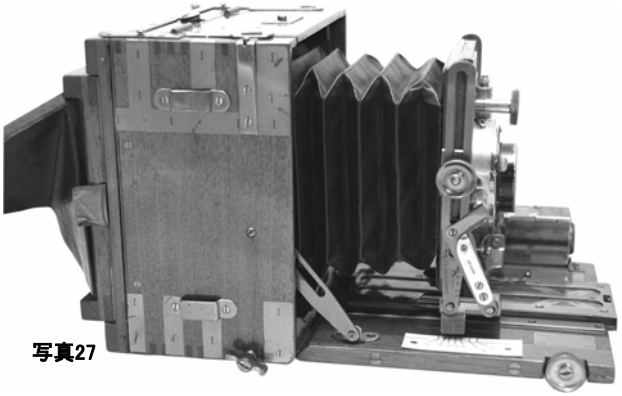


写真27